UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,879	11/05/2001	Patricia M. Savu	56612US003	7640

32692 7590 02/08/2007

3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427

EXAMINER	
NILAND, PATRICK DENNIS	
ART UNIT	PAPER NUMBER
1714	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/992,879	SAVU ET AL.	
	Examiner	Art Unit	
	Patrick D. Niland	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) *5,7,8 and 12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6,9-11 and 13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/10/06 has been entered.

The originally made restriction requirement and election are maintained since the RCE by definition is directed to the same invention as originally examined. The amendment of 11/10/06 has been entered. Claims 1-13 are pending. Claims 5, 7-8, and 12 are withdrawn as being directed to a non-elected invention.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4, 6, 9-11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of the teachings of US Pat. No. 5744295 Pitt et al., US Pat. No. 5472455 Mehreteab et al, and US Pat. No. 6319428 Michot et al..

The anions and cations of the instant claims are known for use in surfactant and conductive compounds known in the art but the prior art does not teach the compounds of the instant claims in which these cations and anions are used in the same compound. By virtue of being conductive/ionic, these compounds will necessarily be antistatic for reasons clear to the ordinary skilled artisan. It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the instantly claimed combination of anions and cations in a single

compound because such a combination would have been expected to give the benefits taught by Mehreteab, Pitt et al., and Michot et al. The resulting compound would have been expected to possess the electric properties of the instantly claimed imide, including the delocalized anionic load and its associated benefits, as taught by the abstract; column 2, lines 8-67, particularly 51-53; column 3, lines 1-15 and 50-61; column 8, lines 20-45, particularly 31-32; and the remainder of Michot et al., the properties of the instantly claimed ammonium cations, including the antistatic properties disclosed by Pitt, the surfactant properties of the obvious HLB containing ammonium polyether, discussed at the abstract; column 1, lines 14-40; column 2, lines 13-67; column 3, lines 1-67; column 5, lines 33-51 which shows surfactants to be desirable in enhancing conductivity; and the remainder of Pitt et al., and the improved surfactant properties obtained in combining anionic and cationic surfactants. Due to their obvious HLBs, each of the instantly claimed anions and cations are surfactants.

The applicant's arguments are not persuasive because they amount to stating that because LiF is not a good antistat neither would it be expected that the instantly claimed compounds would be. First of all there is no probative evidence that when LiF is placed in a medium that dissociates the Li from the F that it is not a good antistat. Secondly, F- is not subject of the instant claims. Fluoride is known to behave differently than most anions due to its extreme electronegativity. Compare the dissociation consant of HF to that of HCl for example. It is not representative of other anions. The argument that because LiF is not a good antistat, one cannot predict that the instantly claimed combinations of anions and cations would function as an antistat is not persuasive for these reasons and because the argument does not address the prior art cited.

The applicant argues what is required to give an antistat and references a Federal Test method. The claims do not require the definition of antistat employed and/or argued by the applicant. The claims do not require the antistat to be an antistat in only polypropylene. The examiner disagrees that being a conductor does not necessarily make a good antistat. Conductor implies antistat by its definition, e.g. the charge moves in a conductor and is not static. The examiner has reviewed the applicant's examples. It is noted that the counterion of the comparative example is Cl- which is particularly hydrophilic i.e. soluble in water. It is well understood by the ordinary skilled artisan that polypropylene is extremely hydrophobic, i.e. not soluble in water. The Cl- is therefore expected to not disperse very homogeneously in polypropylene. It will thus exist as discrete loci surrounded by large portions of the matrix, e.g. polypropylene. The charge would therefore have to travel over large distances through insulating polypropylene to move from ion to ion. It is well understood that this will not happen in a "static" electricity situation by definition of the compound that is able to have static electricity, e.g. polypropylene in the applicant's examples. The polypropylene is a well known insulator. Thus, insulation rather than conductance is the expected situation for the situation using the Cl- counter ion. The counter ion of antistat 5 is very hydrophobic and is thus expected to disperse readily within the polypropylene since hydrophobic things are known to disperse more readily in hydrophobic things than do hydrophilic things disperse in hydrophobic things. This better dispersing ability means that there will be lesser distances between ions as there will not be the hydrophobic hydrophilic repulsive forces as there are where Cl- is used. Thus the charge will have to travel over lesser distances and through less insulating polypropylene and it is expected to be discharged more easily. The applicant's results are not seen to be unexpected

therefore as this is readily predictable to the ordinary skilled artisan as is the expectation that the opposite result occurs where the matrix phase is more hydrophilic than polypropylene such as polyethylene oxide. The same logic applies to argued examples 2 and C2. The applicant provides no evidence that cations and anions known to be separately useful in conductive compounds etc cannot be assumed to be useful together as antistats. The examiner disagrees with this argument for the reasons stated above and for reasons clear to the ordinary skilled artisan. This rejection is maintained.

4. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick D. Niland
Primary Examiner
Art Unit 1714